U.S. Appln. No. 10/536,926
Response to Office Action dated November 15, 2010

PATENT
450100-04849

IN THE CLAIMS:

The following listing of the claims represents the claims now present in this application. This listing supersedes and replaces all prior claim listings. Please cancel claims 17 and 34 without prejudice and amend claims 1, 18-19, and 35-36 as follows:

Listing of Claims

1.   (Currently Amended) A dialog control device to customize dialog between a user and a robot comprising:

memory means for storing various pieces of information, appendant to an object, as values corresponding to respective items of the object and for storing a degree of impression relative to the value, wherein the degree of impression indicates whether the item is used in future conversations, wherein the various pieces of information are acquired by the robot [[by]] and based on a voice recognition process and visual recognition of a user; and

conversation generation means for (a) selecting, in response to an item of said object defined as a topic about the user, another topic about the user relating to the topic used in the immediately preceding conversation and (b) generating at least one of (1) an acquisition conversation for acquiring the value of the item, selected as the topic, from the user [[or]] and (2) a utilization conversation for utilizing the value of the item in the topic, already stored in said memory means, as the next conversation based on the degree of impression wherein a frequency of a utilized item is varied;

said conversation generation means being adapted to store the acquired value, acquired by said acquisition conversation, as the value of the corresponding item, wherein the dialog control device makes a conversation with the user that is customized for the user.

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2.   (Original) The device according to claim 1, wherein

said conversation generation means selects any other item of the same object to which the topic used in said immediately preceding conversation belongs as the next topic and generates said utilization conversation by utilizing the value of the item already stored in said memory means.

3.   (Original) The device according to claim 1, wherein

said conversation generation means selects an item relating to the same object to which the topic used in said immediately preceding conversation belongs as the next topic and generates said utilization conversation by utilizing the value of the item already stored in said memory means.

4.   (Original) The device according to claim 1, wherein

said conversation generation means selects any of the items of said object identifiable from the value of the item of the topic used in said immediately preceding conversation as the next topic and generates said utilization conversation by utilizing the value of said any of the items already stored in said memory means.

5.   (Original) The device according to claim 1, wherein

said conversation generation means selects the item of said object same as the topic used in said immediately preceding conversation as the next topic and generates said utilization conversation by utilizing the value of the item already stored in said memory means.

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6.   (Original) The device according to claim 1, wherein

said conversation generation means selects the same item of another object having a value same as the value of the item of the topic used in said immediately preceding conversation as the next topic and generates said utilization conversation by utilizing the value of the same item already stored in said memory means.

7.   (Original) The device according to claim 1, wherein

said conversation generation means selects an item of another object relating to the value of the item of the topic used in said immediately preceding conversation as the next topic and generates said utilization conversation by utilizing the related value already stored in said memory means.

8.   (Original) The device according to claim 1, wherein

said conversation generation means selects any other item of the same object to which the topic of said immediately preceding conversation belongs as the next topic and generates said acquisition conversation in order to acquire the value of said any other item.

9.   (Original) The device according to claim 1, wherein

said conversation generation means selects an item relating to the same object to which the topic used in said immediately preceding conversation belongs as the next topic and generates said acquisition conversation in order to acquire the value of the related item.

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10.   (Original) The device according to claim 1, wherein

said conversation generation means selects any of the items of said object identifiable

from the value of the item of the topic used in said immediately preceding conversation as the

next topic and generates said acquisition conversation in order to acquire the value of said any of

the items.

11.   (Original) The device according to claim 1, wherein

said conversation generation means generates said utilization conversation by utilizing a

matter that can be acquired on the basis of the value of the item of said selected topic.

12.   (Original) The device according to claim 1, wherein

said conversation generation means includes:

memory acquisition conversation generation means for generating said acquisition

conversation;

memory utilization conversation generation means for generating said utilization

conversation;

situation judgment means for selecting either said memory acquisition conversation

generation means or said memory utilization conversation generation means and have said

memory acquisition conversation generation means or said memory utilization conversation

generation means, whichever selected, generate said next conversation.

13.   (Original) The device according to claim 12, wherein

said situation judgment means judges to have either said memory acquisition

conversation generation means generate said acquisition conversation or said memory utilization

conversation generation means generate said utilization conversation on the basis of the first

extent that is the ratio of the number of items whose values are not acquired relative to the total

number of items of the dialog partner and the second extent that is the ratio of the number of

items whose values are acquired relative to the total number of items of said dialog partner.

14.   (Previously Presented) The device according to claim 13, wherein

said situation judgment means has said memory acquisition conversation generation means

generate said acquisition conversation when said first extent is greater than said second extent

but has said memory utilization conversation generation means generate said utilization

conversation when said first extent is smaller than said second extent.

15.   (Original) The device according to claim 1, wherein

        said conversation generation means holds history of the used topics and generates said

acquisition conversation or said utilization conversation by referring to the history.

16.   (Original) The device according to claim 15, wherein

        said conversation generation means generates said acquisition conversation or said

utilization conversation so as not to use the same topic in a single dialog with the same dialog

partner by referring to the history.

17.   Canceled.

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18.   (Currently Amended) The device according to claim [[17]] 1, characterized by further comprising:

internal condition management means adapted to hold parameters indicating the internal condition and change the values of the parameters according to external stimuli;

each of said degrees of impression representing the difference of the parameter values of the corresponding parameter held by said internal condition management means before and after the acquisition of the corresponding value.

19.   (Currently Amended) A dialog control method to customize dialog between a user and a robot comprising:

a first step of storing various pieces of information, appendant to an object, as values corresponding to respective items of said object and for storing a degree of impression relative to the value, wherein the degree of impression indicates whether the item is used in future conversations, wherein the various pieces of information are acquired by the robot [[by]] and based on a voice recognition process and visual recognition of a user;

a second step of selecting, in response to an item of said object defined as a topic about the user, another topic about the user relating to the topic used in the immediately preceding conversation; and

a third step of generating at least one of (a) an acquisition conversation for acquiring the value of said item selected as the topic from the user and [[or]] (b) a utilization conversation for utilizing the value of the item in the already stored topic as the next conversation based on the degree of impression wherein a frequency of a utilized item is varied;

the acquired value, acquired by the acquisition conversation, being stored in the second

step as the value of said corresponding item, wherein the robot makes a conversation with the

user that is customized for the user.

20.   (Original) The method according to claim 19, wherein

any other item of the same object to which the topic used in said immediately preceding

conversation belongs is selected as the next topic and said utilization conversation is generated

by utilizing the value of the item already stored in said memory means in said second step.

21.   (Original) The method according to claim 19, wherein

an item relating to the same object to which the topic used in said immediately preceding

conversation belongs is selected as the next topic and said utilization conversation is generated

by utilizing the value of the item already stored in said memory means in said second step.

22.   (Original) The method according to claim 19, wherein

any of the items of said object identifiable from the value of the item of the topic used in

said immediately preceding conversation is selected as the next topic and said utilization

conversation is generated by utilizing the value of said any of the items already stored in said

memory means in said second step.

23.   (Original) The method according to claim 19, wherein

the item of said object same as the topic used in said immediately preceding conversation

is selected as the next topic and said utilization conversation is generated

by utilizing the value of the item already stored in said memory means in said second step.

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24.   (Original) The method according to claim 19, wherein

the same item of another object having a value same as the value of the item of the topic

used in said immediately preceding conversation is selected as the next topic and said utilization

conversation is generated by utilizing the value of the same item already stored in said memory

means in said second step.

25.   (Original) The method according to claim 19, wherein

an item of another object relating to the value of the item of the topic used in said

immediately preceding conversation is selected as the next topic and said utilization conversation

is generated by utilizing the related value already stored in said memory means in said second

step.

26.   (Original) The method according to claim 19, wherein

any other item of the same object to which the topic of said immediately preceding

conversation belongs is selected as the next topic and said acquisition conversation is generated

in order to acquire the value of said any other item in said second step.

27.   (Original) The method according to claim 19, wherein

an item relating to the same object to which the topic used in said immediately preceding

conversation belongs is selected as the next topic and said acquisition conversation is generated

in order to acquire the value of the related item in said second step.

28.   (Original) The method according to claim 19, wherein

        any of the items of said object identifiable from the value of the item of the topic used in said immediately preceding conversation is selected as the next topic and said acquisition conversation is generated in order to acquire the value of said any of the items in said second step.

29.   (Original) The method according to claim 19, wherein

        said utilization conversation is generated by utilizing a matter that can be acquired on the basis of the value of the item of said selected topic in said second step.

30.   (Original) The method according to claim 19, wherein

        it is judged to generate either said acquisition conversation or said utilization conversation on the basis of the first extent that is the ratio of the number of items whose values are not acquired relative to the total number of items of the dialog partner and the second extent that is the ratio of the number of items whose values are acquired relative to the total number of items of said dialog partner in said second step.

31.   (Original) The method according to claim 30, wherein

        said acquisition conversation is generated when said first extent is greater than said second extent but said utilization conversation is generated when said first extent is smaller than said second extent in said second step.

32.   (Original) The method according to claim 19, wherein

history of the used topics is held and said acquisition conversation or said utilization conversation is generated by referring to the history in said second step.

33.   (Original) The method according to claim 32, wherein

said acquisition conversation or said utilization conversation is generated so as not to use the same topic in a single dialog with the same dialog partner by referring to the history in said second step.

34.   Canceled.

35.   (Currently Amended) The method according to claim [[34]] 19, wherein

parameters indicating the internal condition are held and the values of the parameters are changed according to external stimuli in said first step;

each of said degrees of impression representing the difference of the parameter values of the corresponding parameter held by said internal condition management means before and after the acquisition of the corresponding value.

36.   (Currently Amended) A robot device that customizes dialog with a user comprising:

memory means for storing various pieces of information appendant to an object as values corresponding to respective items of the object and for storing a degree of impression relative to the value, wherein the degree of impression indicates whether the item is used in future conversations, wherein the various pieces of information are acquired by the robot [[by]] and based on a voice recognition process and visual recognition of the user; and

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conversation generation means for (a) selecting, in response to an item of said object defined as a topic about the user, another topic about the user relating to the topic used in the immediately preceding conversation and (b) generating at least one of (1) an acquisition conversation for acquiring the value of the item, selected as the topic, from the user and [[or]] (2) a utilization conversation for utilizing the value of the item in the topic, already stored in said memory means, as the next conversation based on the degree of impression wherein a frequency of a utilized item is varied;

said conversation generation means being adapted to store the acquired value, acquired by the acquisition conversation, in said memory means as the value of the corresponding item, wherein the robot makes a conversation with the user that is customized for the user.